PATENT ABSTRACTS OF JAPAN

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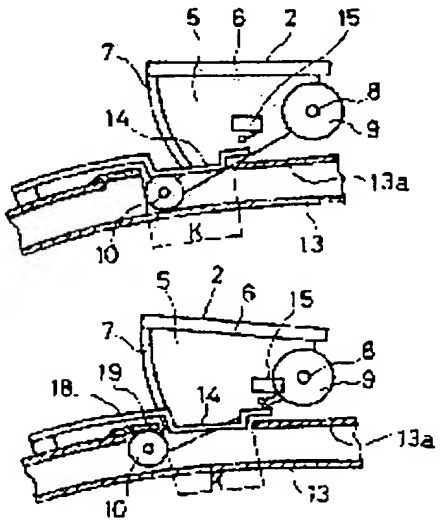
(71)Applicant : TOSHIBA CORP
(72)Inventor : KAMINAGA MASAMI

(54) DEVICE FOR DETECTING ABNORMALITY OF FOOT STEP OF ESCALATOR

(57)Abstract:

PURPOSE: To prevent falling accident of other passengers due to frequent emergency stops of an escalator, and to secure their safety by providing a stepped portion, which lifts a rear wheel and gives downward impulsive reaction force to the rear wheel through colliding with it when the rear wheel has lifted by a certain amount, at the position before a lifting-up detecting zone of a rear wheel guide rail.



CONSTITUTION: When a foreign object such as a shoe toe and the like comes in contact with a riser 7 of an adjacent foot step 2, a rear wheel 10 is forced to move upward owing to frictional force due to the contact. When the rear wheel 10 travels along a rear wheel guide rail 13, the rear wheel 10 is lifted up momentarily at the stepped portion 18 provided at the position before a lifting-up detecting zone K during the travel. At that time, the frictional resistance due to the contact of the foreign object against the riser 7 is relaxed. When the rear wheel 10 is lifted up by a certain amount, the rear wheel 10 comes into collision with a lower surface of the stepped portion 18, and downward impulsive reaction force is applied on it. Consequently, the rear wheel 10 is knocked down and returned to a normal state prior to arrival to the lifting-up detecting zone K. Accordingly, the rear wheel 10 passes through the lifting-up detecting zone K without lifting up a lever 14. Thus, a limit switch 15 does not operate, and the escalator does not stop unnecessarily.